**Math089 Course Outcomes (Knowledge, Skills, Abilities)**

*Upon successful completion of the course, the successful student will be able to:*

* Use the Addition Principle to solve linear equations.
* Use the Multiplication Principle to solve linear equations.
* Use the principles together to solve linear equations.
* Solve linear inequalities.
* Solve absolute value equations.
* Graph linear equations using a T-table.
* Find the slope of a line.
* Find the equation of a line.
* Use slope and y-intercept to graph linear equations.
* Graph inequalities in two variables.
* Communicate mathematical ideas using appropriate symbols and terminology.
* Critically read application problems.
* Identify pertinent information necessary to solve application problems
* Apply various strategies to solve application problems.
* Use the Product and Power Properties for exponents.
* Add and subtract polynomials.
* Multiply polynomials.
* Divide polynomials.
* Factor out the greatest common factor from polynomials.
* Factor trinomials of the form ax2 + bx + c for a = 1 and a ≠ 1.
* Factor trinomial squares and difference of squares.
* Factor the sum or difference of two cubes.
* Solve a quadratic equation by factoring.

TEXTBOOK TWO (MATH 089 - Pre-College Math II)

**Module 6: Linear Equations**

Basic College Math with Early Integers

Chapter 11: Algebra: Solving Equations and Problems

11.1 Introduction to Algebra

11.2 Solving Equations: The Addition Principle

11.3 Solving Equations: The Multiplication Principle

11.4 Using the Principles Together

Introductory and Intermediate Algebra (combined text)

Chapter 2 Solving Equations and Inequalities

2.4 Formulas

2.5 Applications of Percent

2.6 Applications and Problem Solving

2.7 Solving Inequalities

2.8 Applications and Problem Solving with Inequalities

**Module 7: Introduction to Graphing**

Introductory Algebra

Chapter 3 Graphs of Linear Equations

3.1 Graphs and Applications of Linear Equations

3.2 More with Graphing and Intercepts

3.3 Slope and Applications

3.4 Equations of Lines

3.5 Graphing Using the Slope and the y-intercept

3.6 Parallel and Perpendicular Lines

3.7 Graphing Inequalities in Two Variables

**Module 8: Problem Solving and Strategies**

Math Study Skills Workbook

**Module 9: Polynomials**

Introductory and Intermediate Algebra (combined text)

Chapter 4 Polynomials: Operations

4.1 Integers as Exponents

4.2 Exponents and Scientific Notation

4.3 Introduction to Polynomials

4.4 Addition and Subtraction of Polynomials

4.5 Multiplication of Polynomials

4.6 Special Products

4.7 Operations with Polynomials in Several Variables

4.8 Division of Polynomials

Appendix H Synthetic Division

**Module 10: Factoring**

Introductory and Intermediate Algebra (combined text)

Chapter 5 Polynomials: Factoring

5.1 Introduction to Factoring

5.2 Factoring Trinomials of the Type x2 + bx + c

5.3 Factoring ax2 + bx + c, a ≠ 1: The FOIL Method

5.4 Factoring ax2 + bx + c, a ≠ 1: The ac-Method

5.5 Factoring Trinomial Squares and Differences of Squares

5.6 Factoring Sums or Differences of Cubes

5.7 Factoring: A General Strategy

5.8 Solving Quadratic Equations by Factoring

5.9 Applications of Quadratic Equations